

III. Overview: the CERCLA Process at DOE Facilities

Overview

- DOE Facilities
- The CERCLA Process
 - ➡ Removal & remedial actions
 - ➡ Operable units
- Regulatory process at DOE facilities
 - ➡ Federal Facility Agreements
 - ➡ Statutory/regulatory overlaps

In the Beginning. . . DOE Was Self-Regulating

- Atomic Energy Act of 1946 (AEA) established the Atomic Energy Commission (AEC)
 - Development of atomic energy consistent with U.S. security interests
 - Federal government controlled fissionable material
- AEA amended in 1954
- Energy Reorganization Act of 1974
 - Separated licensing & energy functions
 - Established the NRC
- Department of Energy Organization Act of 1977
 - Established DOE

Overview



Large, Complex Facilities Were Built to Develop Atomic Energy

- Located in remote areas
- Information on activities & releases under a cloak of “national security” secrecy



Overview

The Oak Ridge Reservation



35,000 ACRES

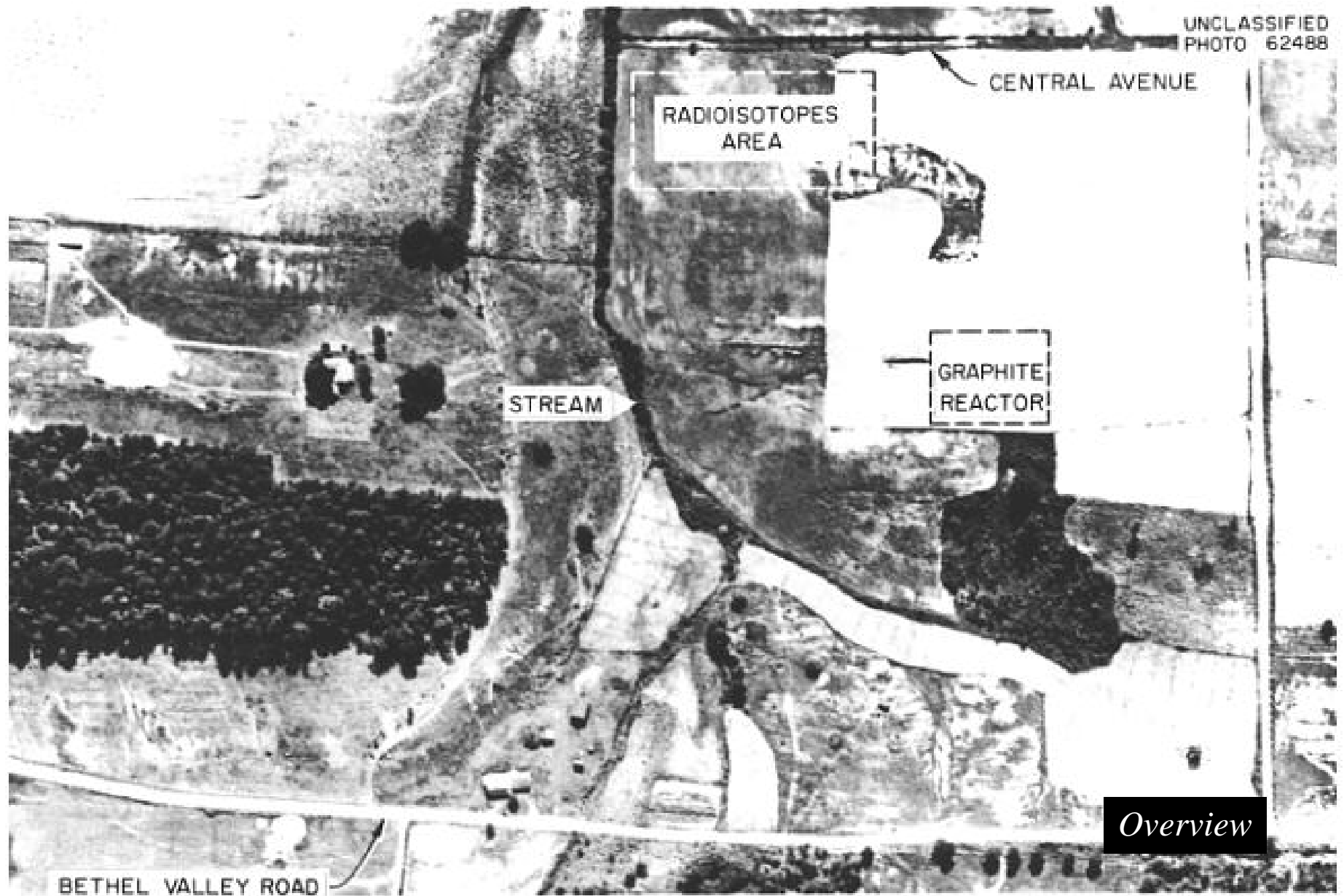
Overview

ORNL Site 1943

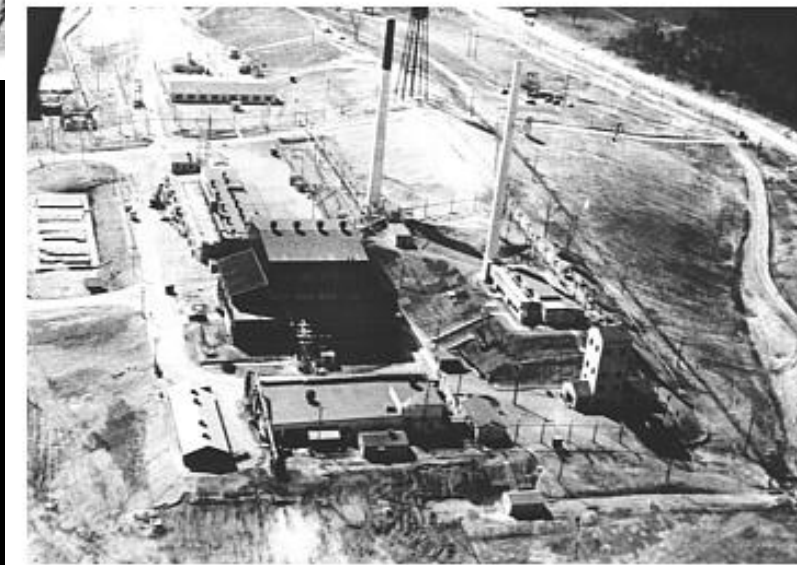
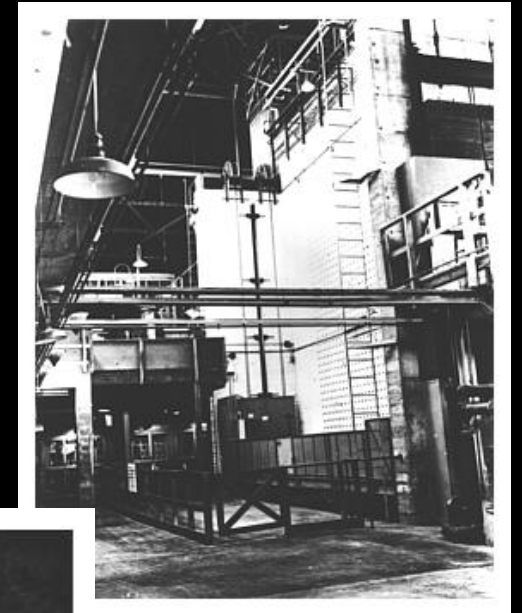


Overview

Graphite Reactor Site 1943

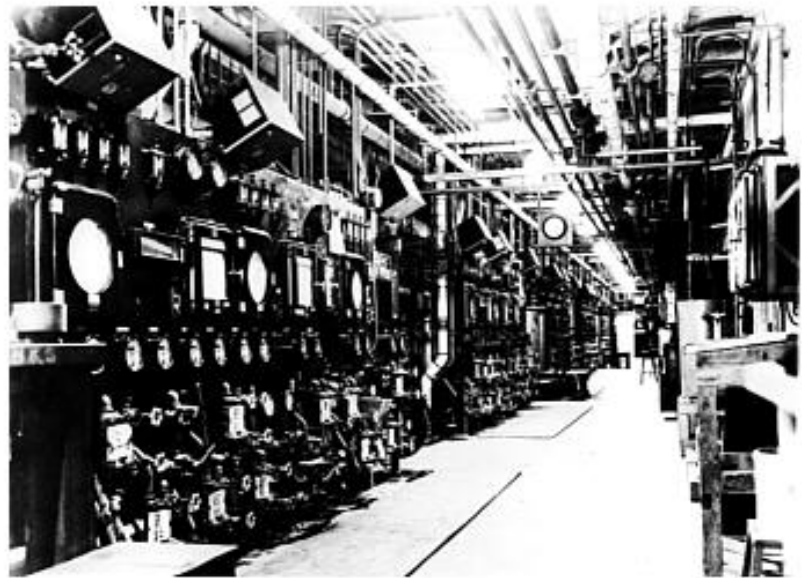


Graphite Reactor 1943



Overview

Chemical Pilot Plant & Hot Laboratory, 1943



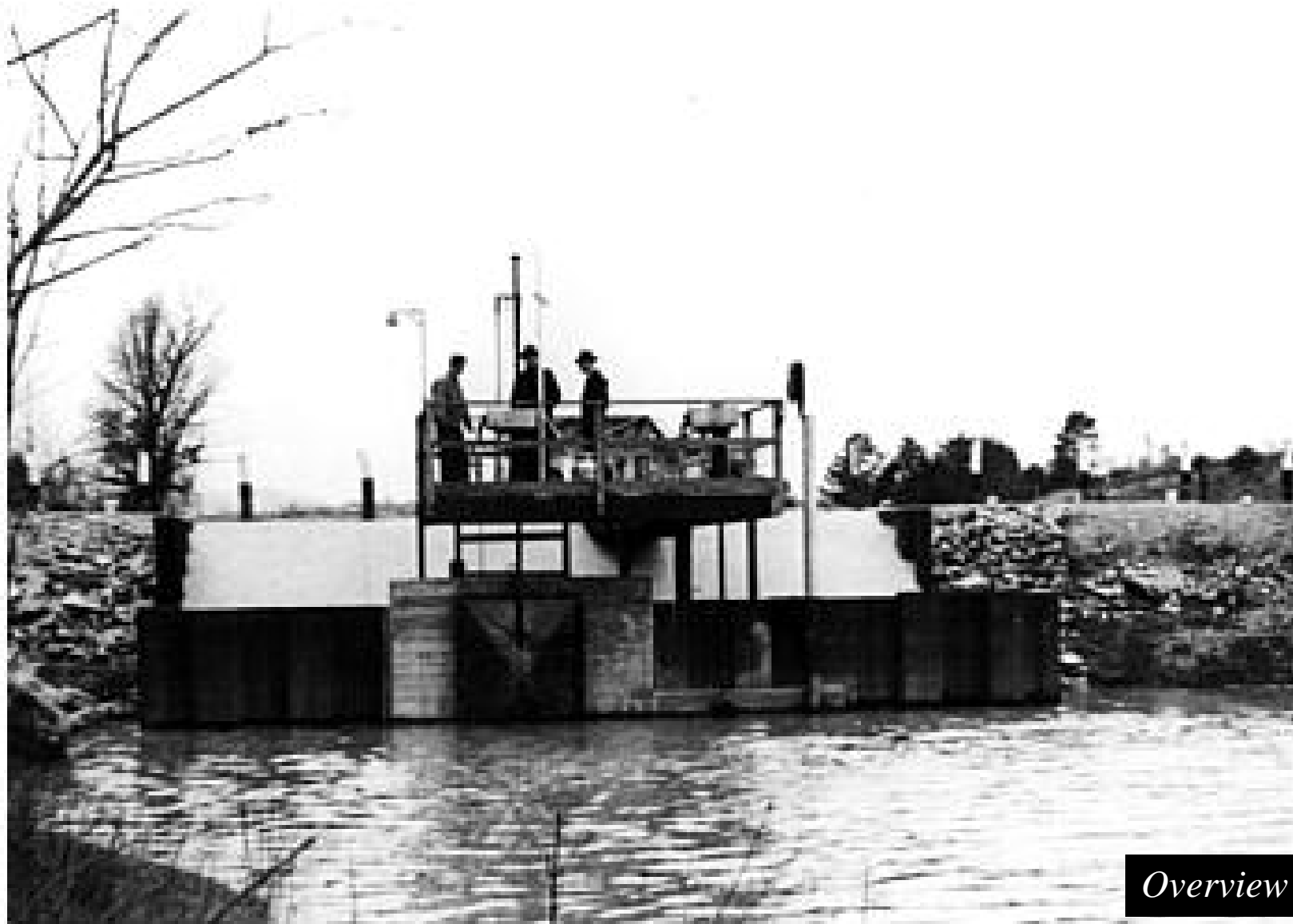
Overview

Gunite Tanks 1943



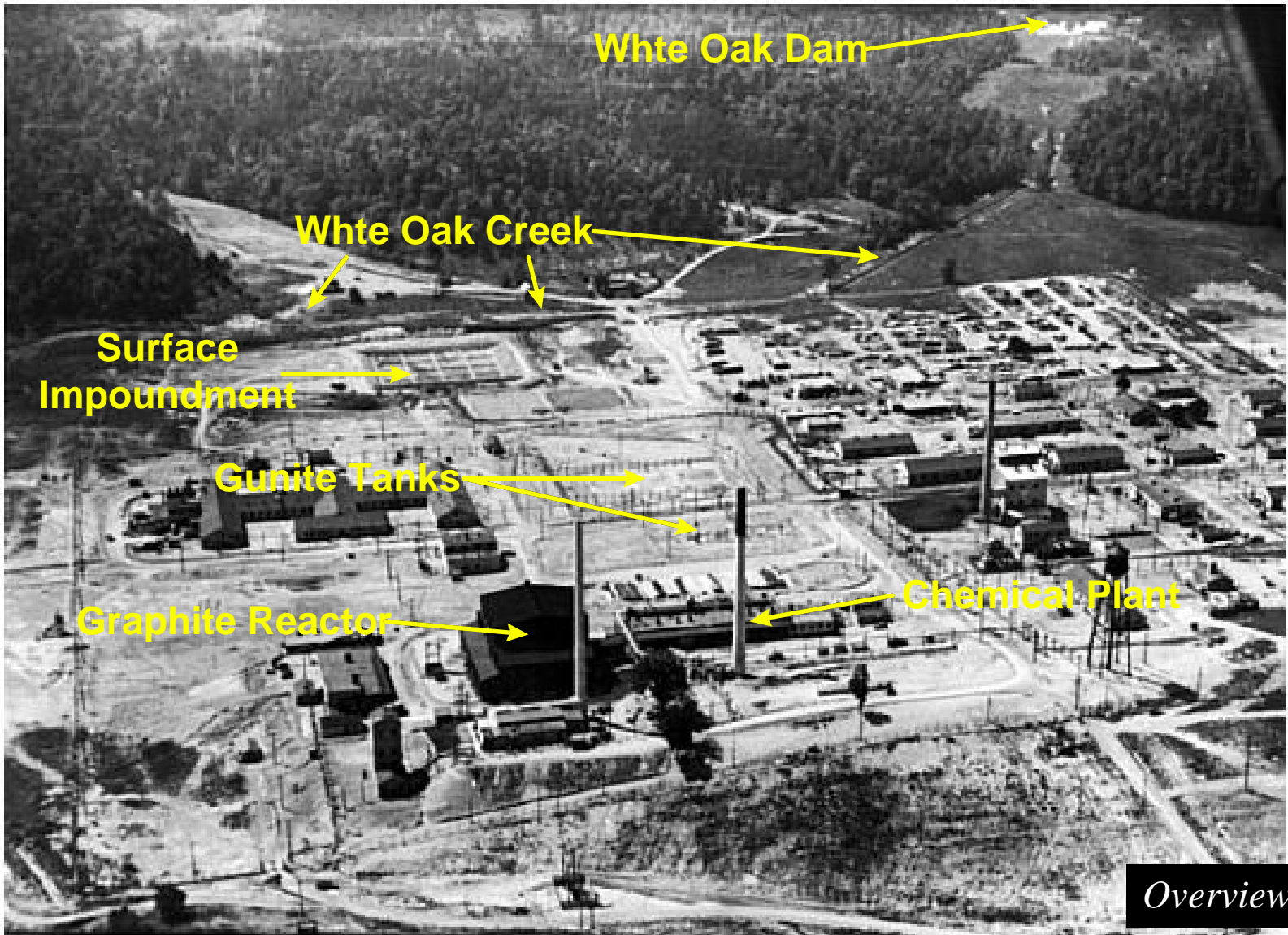
Overview

White Oak Lake, 1943



Overview

Aerial View, 1943



Waste Area Group (WAG) #1, ORNL

Graphite Reactor

Gunite Tanks

Surface
Impoundments

Overview



RADIATION

SAFETY BULLETIN



CONTAMINATED FROGS

Frogs exhibiting detectable levels of radiation, some dead and some alive, have been found in areas on the South Central portion of the Laboratory (mainly south of Building 3517 and East of Building 3544). They are thought to have migrated from the 3524 retention pond where they hatched. The levels of radiation are not excessive and do not constitute a significant threat of exposure to others but are well above background and the frogs should be treated with the same degree of caution as other low level contaminated items.

Should a frog "hop" into or be found in your area you should:

1. Contact health physics and have the frog checked for radioactivity.
2. Return the frog to the 3524 retention pond if it is alive.
3. Manage the frog as radioactive waste if it is dead and found by Health Physics to be emitting detectable levels of radiation.

Date: July 1991

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13 1-901

Overview

In 1970's Environmental Laws Were Passed by Congress

- The National Environmental Policy Act of 1970 (NEPA)
- The Clean Air Act of 1970 (CAA)
- The Clean Water Act of 1972 (CWA)
- The Safe Drinking Water Act of 1974 (SDWA)
- The Resource Conservation & Recovery Act of 1976 (RCRA)
- The Toxic Substances Control Act of 1977 (TSCA)
- The Comprehensive Environmental Response, Compensation & Liability Act of 1980 (CERCLA)

Overview

DOE Facilities Were not Subject to Environmental Laws

- Most environmental laws exempt regulation of “source, special nuclear & byproduct materials”
- Federal facilities not specifically identified by environmental laws
- DOE facilities shrouded most information on activities & releases under the cloak of “national security”

In 1986 CERCLA Was Applied to Federal Facilities

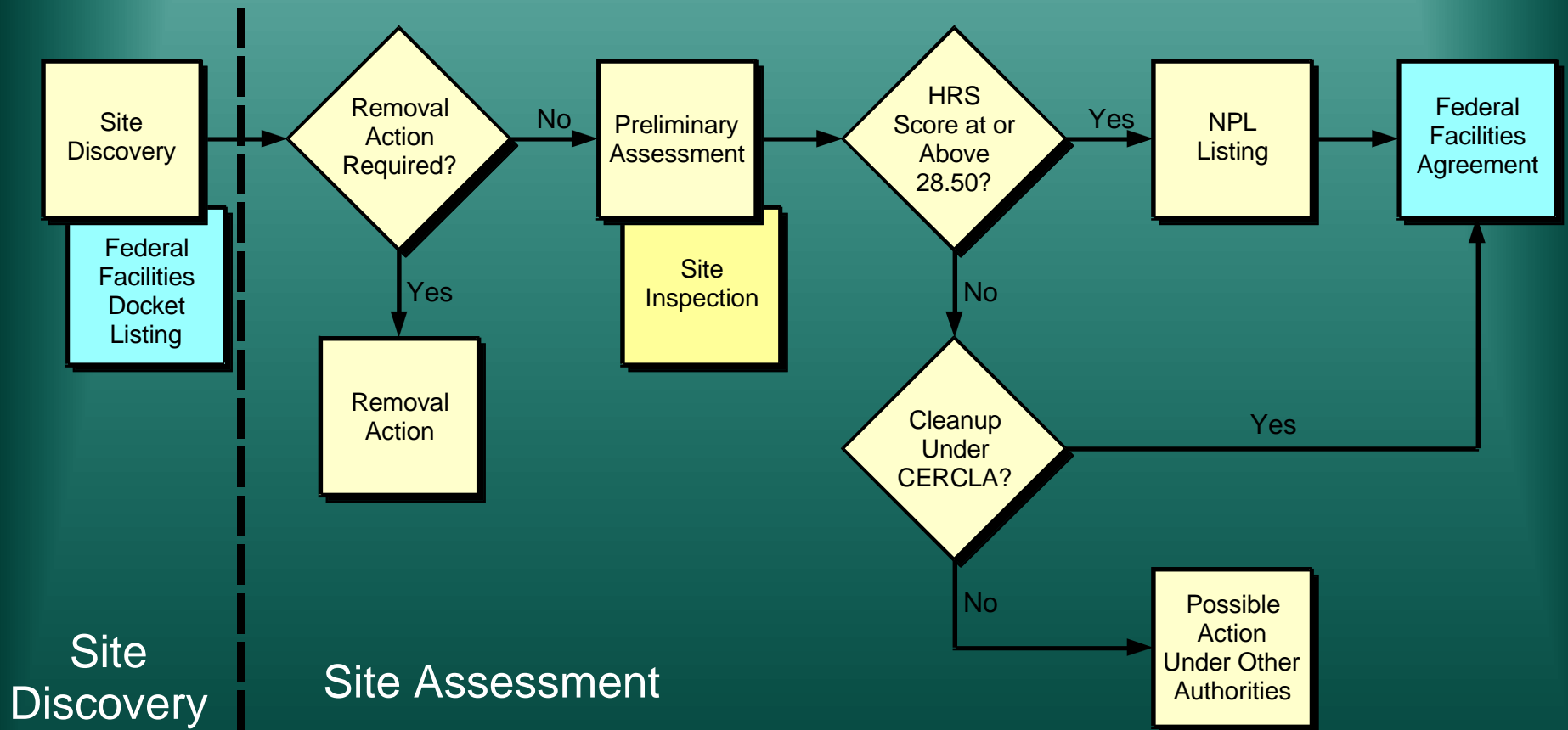
- In same manner & to same extent as non-governmental entities
- Federal Agency Hazardous Waste Compliance Docket established
- Required IAG between EPA & federal agency on final remedy
- Remedy selected jointly by head of federal agency & EPA Administrator or by EPA Administrator if unable to agree

The CERCLA Process

- Remedial actions
- Removal actions
 - Emergency
 - Time-critical
 - Non-time critical
- Operable units

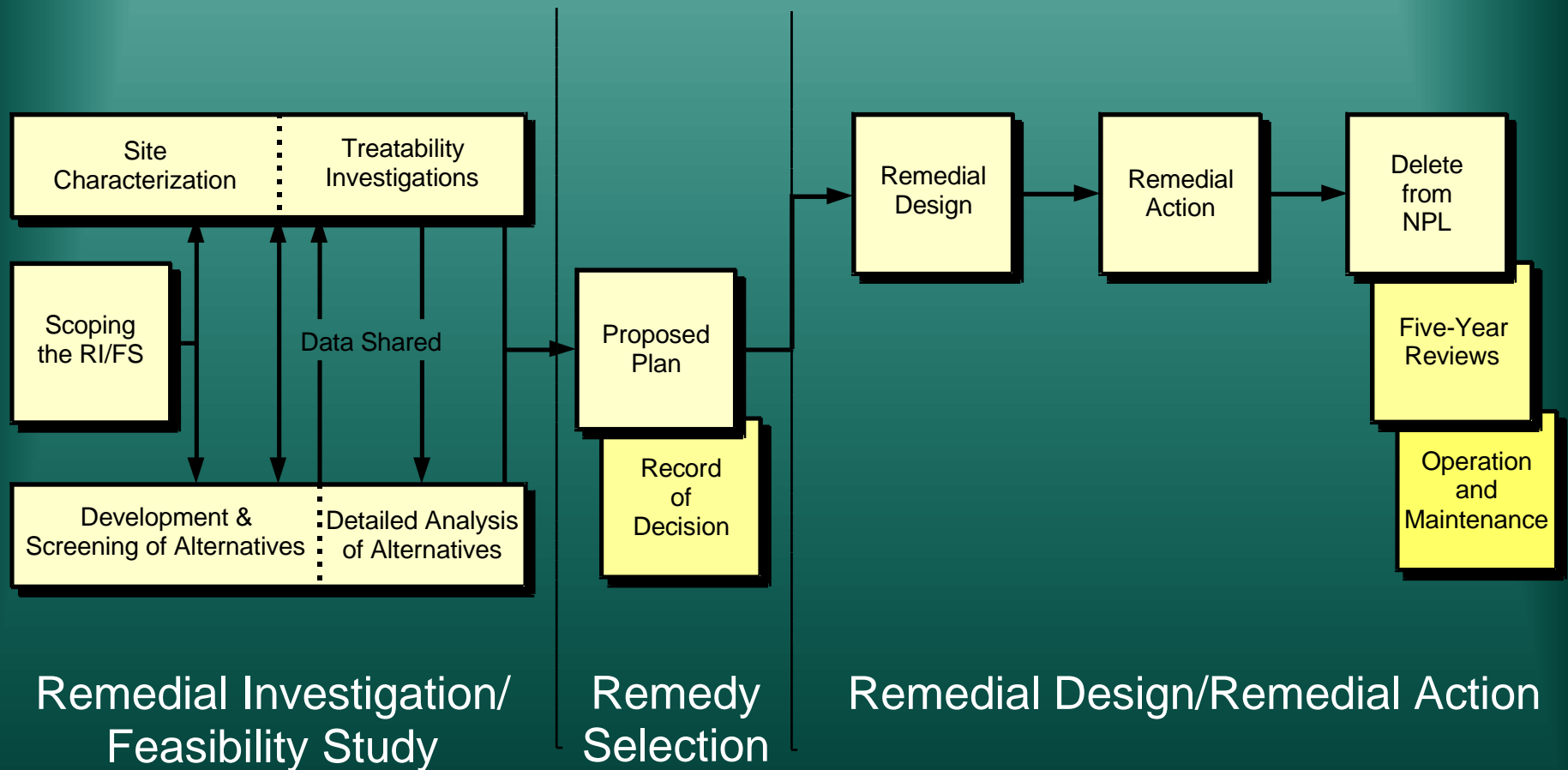
Overview

Remedial Actions



Overview

Remedial Action Process



Overview

Removal Actions

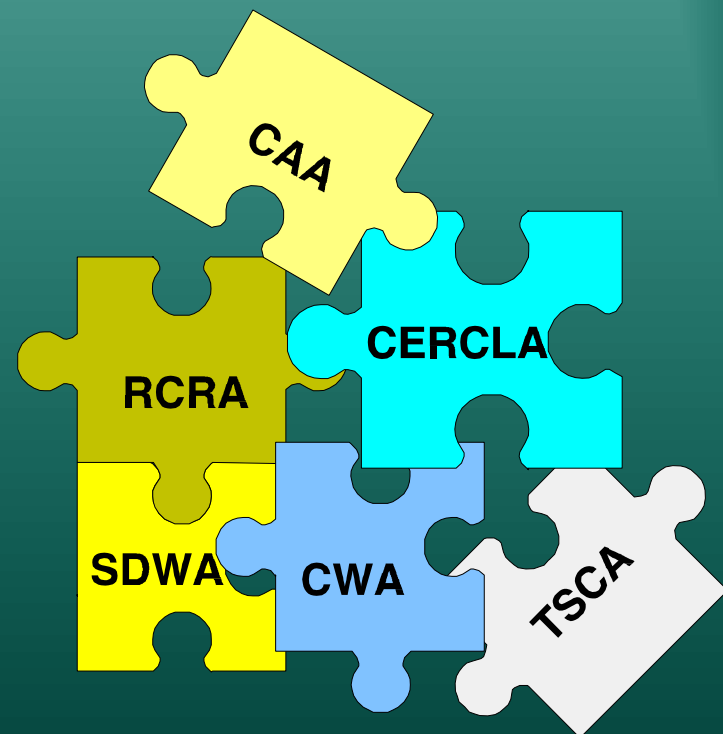
- Emergency (immediate)
- Time-Critical (≤ 6 months)
- Non-time critical (> 6 months)

The Regulatory Process

- CERCLA required IAG between EPA & federal agency on final remedy
 - ➡ Remedy selected jointly by head of federal agency & EPA Administrator
 - ➡ If unable to agree, EPA Administrator makes decision
- DOE established policy of instituting Federal Facility Agreements (FFAs) at all sites
 - ➡ Tri-party agreements
 - ➡ DOE, EPA & state

Often Several Laws May Apply at Complex DOE Sites

- Many DOE CERCLA sites have RCRA units
- Most DOE sites have RCRA, CWA & CAA permits



Overview

Many Regulatory Authorities

- DOE owner
- EPA regulator
- State regulators
- Others
 - Nuclear Regulatory Commission
 - Army Corps of Engineers

Summary

- DOE facilities are large & complex
 - ➡ Wide variety of issues/operations
 - ➡ Chemical & radiological contamination
- CERCLA process applied to DOE facilities since 1986
- DOE establishes agreement among regulators & across different regulatory frameworks in FFAs